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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/484,865 | 01/18/2000 | Fred Albert Dykins | 1015-011 | 1215 |

22898 7590 11/06/2002

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EXAMINER

TANG, KENNETH

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/484,865 | DYKINS ET AL. |
| | Examiner | Art Unit |
| | Kenneth Tang | 2156 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 6 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 January 2000.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-25 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2, 3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. A definition of a “programmer/feeder system” was not disclosed in the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The “programming/feeder system” described in the specification is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4, 13, 15-16, and 25 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hosaka et al. (US 5,896,292) (hereinafter Hosaka).

Referring to claim 1, Hosaka teaches a method for using a computer system for interacting with a processing system to process a microdevice comprising the steps of:

- providing processing information related to a microdevice as a task (“sequence flow information, namely information such as the task”, “control computer 702”, col. 52, lines 47-55);
- assembling the processing information for the task in the computer system (“processing”, “assembling”, “tasks”, col 21, lines 47-51);
- providing the processing information for the task for off-line connection from the computer system to the processing system (“off-line”, “control computer”, “operating state”, “tasks being executed, processes and program line, etc.”, col. 12, lines 30-40);

Art Unit: 2156

- performing the task by the processing system independent of the computer system using processing information obtained through the off-line connection (“off-line mode in which the apparatus is capable of operating as a stand-alone apparatus”, col. 12, lines 1-6);
- developing return information resulting from the processing system using the processing information (“reverse compilation”, “handshaking be performed positively in two directions”, and “data generated”, “data is analyzed and totalized”, col. 12, lines 44-56). It is inherent that the information returning in the reverse direction stated in the reference of Hosaka is “return information.”
- returning the return information through the off-line connection to the computer system (“off-line”, col. 12, line 32, and “reverse compilation”, “handshaking be performed positively in two directions”, and “data generated”, “data is analyzed and totalized”, “monitor computer 701”, col. 12, lines 44-56).

Referring to claims 2 and 14, Hosaka teaches:

- providing a processing system on-line with the computer system (“control computer” and “on-line”, col. 12, lines 30-36);
- providing the processing information for the task for on-line connection from the computer system to the processing system (“off-line”, “control computer”, “operating state”, “tasks being executed, processes and program line, etc.”, col. 12, lines 30-40);
- performing the task by the processing system dependent on the computer system using processing information obtained through the on-line connection (“on-line”, “control computer”, “operating state”, “tasks being executed, processes and program line, etc.”,

col. 12, lines 30-40). It is inherent that the processing is done dependently to the computer system.

Referring to claims 3 and 15, Hosaka teaches the steps of:

- providing an operator mode (“apparatus mode”, “operating state”, col. 12, lines 30-36);
- using the processing information for the task in the operator mode from the computer to the processing system (“control computer”, “apparatus mode”, “operating state”, “tasks being executed, processes and program line, etc.”, col. 12, lines 30-40);
- returning the return information in the operator mode through the off-line connection to the computer system (“off-line”, col. 12, line 32, and “reverse compilation”, “handshaking be performed positively in two directions”, and “data generated”, “data is analyzed and totalized”, “monitor computer 701”, col. 12, lines 44-56, and “control computer”, “apparatus mode”, “operating state”, col. 12, lines 30-40);
- storing the return information in the computer system (“written in the buffer by the control computer 702”, col. 12, lines 53-56).

Referring to claims 4 and 16, Hosaka teaches:

- inputting the processing information related to the task in the administrator mode (“input/output units 703-706”, col. 11, lines 4-10, and “program”, “assigned”, “data input”, “computer”, col. 4, lines 29-33). It is inherent that Hosaka’s “administrator mode” occurs when varying the inputs/outputs.

- editing processing information related to the task in the administrator mode (“input/output units 703-706”, col. 11, lines 4-10, and “controlling the processes of operation“monitor computer has an editor program”, col. 4, line 11);
- storing processing information related to the microdevice for the processing system as the task in the administrator mode (“storing data and programs”, “monitor computer 101”, “control computer 105”, col. 9, lines 3-14, and “stores data representing the process ended in the control computer”, See claim 22). It is inherent that there is a microdevice located in a computer.

While claims were rejected under 35 USC 112, 1st and 2nd paragraph, in order to advance prosecution, claims will be treated on the merits in view of the examiner's best understanding of the disclosure and the prior art.

Referring to claim 13, it is rejected for the same reasons as stated in the rejection of claim

1. Hosaka further discloses an apparatus where programming and feeding are performed in a single device (see Figures 1 and 2, item 108).

Referring to claim 25, Hosaka teaches:

- providing information for affecting changes selected from a group consisting of software (“software having different functions such as control program development, control program debugging or data analysis”, col 2, lines 39-44), firmware (“the data transmission means has a dual-port memory capable of real-time reading/writing to/from

all or part of a memory provided within the control computer or monitor computer”, col 3, lines 50-54), and a combination thereof by using the portable memory medium (“an external storage device 6603”, see Fig. 66, col. 1, lines 26-31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 9-11, 17 and 21-23 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hosaka et al. (hereinafter Hosaka) (US 5,896,292) in view of Fujino et al. (hereinafter Fujino) (US 5,262,954).

Referring to claims 5 and 17, Hosaka teaches the steps of:

- providing processing system setup parameters (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20). It is inherent that the setup parameters are contained in the software that controls the input/output control device because these parameters are necessary to run the process;

Art Unit: 2156

- providing processing system shutdown parameters (“parameters”, col. 19, line 65, and “input/output control device”, “managing start-up/shut-down”, col. 4, lines 17-20). It is inherent that the parameters are contained in the software that controls the input/output control device;
- providing processing system process-specific parameters (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “specific setting start-up command”, col. 29, lines 32-35);
- sending processing system setup parameters to the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 37-40); It is inherent that the setup parameters are contained in the software that controls the input/output control device because these parameters are necessary to run the process.
- inputting the number of processed microdevices to be output from the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “specific setting start-up command”, col. 29, lines 32-35); It is inherent that the number of processed microdevices to be output is determined and inputted either manually or through automation and is inputted using the input/output control device.
- sending processing system process-specific parameters to the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “specific setting start-up command”, col. 29, lines 32-35, and “data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 37-40);

Art Unit: 2156

- sending processing system shutdown parameters to the processing system (“parameters”, col. 19, line 65, and “input/output control device”, “managing start-up/shut-down”, col. 4, lines 17-20). It is inherent that the parameters are contained in the software that controls the input/output control device;

Hosaka fails to explicitly teach:

- controlling the handling of microdevices;

However, Fujino teaches this limitation by disclosing a “controller device which sets individual control conditions and a plurality of automatic working devices” (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of controlling the handling of microdevices to the existing method of Hosaka for the reason of increasing the functionality and efficiency of the system by being able to control microdevices in an automated manner.

Hosaka also fails to explicitly teach:

- processing microdevices

However, Fujino teaches this limitation by disclosing devices that are processed (“devices”, “processed”, see Abstract, and “processing equipments as automatic working devices”, col. 1, lines 19-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of processing microdevices to the existing method of Hosaka for the reason of being able to communicate so that the efficiency and control of the automated process will be increased.

Referring to claims 9 and 21, Hosaka teaches the steps of:

- providing microdevice information (“sequence flow information, “control computer 702”, col. 52, lines 47-55);
- providing processing system setup parameters (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20). It is inherent that the setup parameters are contained in the software that controls the input/output control device because these parameters are necessary to run the process;
- providing format information related to the off-line connection (“Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32).
- inputting the number of processed microdevices to be output from the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “specific setting start-up command”, col. 29, lines 32-35); It is inherent that the number of processed microdevices to be output is determined and inputted either manually or through automation and is inputted using the input/output control device.
- providing the processing system setup parameters and format to the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32).

Art Unit: 2156

- transferring the microdevice information from the computer to the processing system (“data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 36-40);
- transferring the processing system format from the computer to the processing system (“data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 36-40, and “input/output control device”, col. 4, lines 17-20, and “Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32);
- obtaining information from the processing of the microdevices (“dual-port memory 4501 is capable of reading and writing in two directions”, col. 12, lines 26-27). It is inherent that information can be obtained or extracted from the dual-port memory.
- transferring the information from the processing of the microdevices (“dual-port memory 4501 is capable of reading and writing in two directions”, col. 12, lines 26-27, and “data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 36-40, and “input/output control device”, col. 4, lines 17-20, and “Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32).

Fujino teaches the steps of:

- processing the microdevices (“devices”, “processed”, see Abstract, and “processing equipments as automatic working devices”, col. 1, lines 19-30).

Referring to claims 10 and 22, Hosaka teaches the step of:

- transferring includes the use of a portable memory medium (“an external storage device 6503, col. 8, lines 40-49, see Fig 65).

Referring to claims 11 and 23, Hosaka teaches the step of:

- transferring includes the use of a direct communication connection (“data communication device 6508 capable of communicating information without impeding the operation of the monitor computer 6504 and a control computer 6509”, col. 8, lines 45-48).

5. Claims 6 and 18 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hosaka et al. (hereinafter Hosaka) (US 5,896,292) in view of Fujino et al. (hereinafter Fujino) (US 5,262,954) and further in view of Nagatomo et al. (hereinafter Nagatomo) (US 4,544,318).

Referring to claims 6 and 18, Fujino teaches the step of:

- providing a number of microdevices (“controller device which sets individual control conditions and a plurality of automatic working devices”, see Abstract);

Hosaka teaches the step of:

- developing statistics from the number of microdevices processed and handled (“when analysis of data is performed in real-time in parallel with control of the production facility, analysis is simply the counting of acceptable parts or defective parts.

Consequently, analysis of the type of defect or analysis of such particulars as deviation

from a standard value is inevitably performed by batch processing after the raw data is acquired in lot units”, col. 2, lines 10-16).

Hosaka and Fujino fail to explicitly teach:

- determining the number of microdevices processed and handled;

However, Nagatomo teaches the determination of the number of microdevices for treatments (“number of the devices”, “determining the number”, col. 4, lines 32-39). It is inherent that microdevices are processed and handled. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of determining the number of microdevices processed and handled to the existing method of Hosaka and Fujino for the reason of increasing the control of the system by knowing the number of microdevices the system has to work with.

6. Claims 7 and 19 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hosaka et al. (hereinafter Hosaka) (US 5,896,292) in view of Fujino et al. (hereinafter Fujino) (US 5,262,954) and further in view of Csipkes et al. (hereinafter Csipkes) (US 6,167,401).

Referring to claims 7 and 19, the references of Hosaka and Fujino both fail to explicitly teach the steps of:

- serializing the microdevices;
- maintaining a log of the serialized microdevices.

However, the reference of Csipkes teaches assigning items to serial numbers (“assign the new values as the current serial numbers”, col. 8, lines 6-9) and recording/maintaining the serial number of the items in a log or table (“tracking table identifies a type of product”, “serial number of a product”, “test files”, “automated manufacturing files”, col. 2, lines 21-29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the features of serializing microdevices and maintaining them in a log to the existing method of Hosaka and Fujino for the reason of increasing control of the system by being able to keep track of each microdevice in the system and perform actions on particular devices (“tracking table being used to link data contained in the action table”, col. 2, lines 21-24).

7. Claims 8 and 20 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hosaka et al. (US 5,896,292) (hereinafter Hosaka) in view of Grundy et al. (hereinafter Grundy) (US 5,224,055).

Referring to claims 8 and 20, Hosaka fails to explicitly teach the steps of:

- combining a plurality of tasks to define a kit
- performing the processing of a kit through the off-line connection.

However, Grundy teaches the use of a kit formed by tasks from a current mode logic process (“kit”, “formed”, “current mode logic process”, “set of instructions”, “design of circuit is simplified”, col. 2, lines 35-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a kit to the existing method of Hosaka

Art Unit: 2156

for the reason of improving reliability by reducing error (“kit”, “reduces the scope for error”, col. 2, lines 40-41).

8. Claims 12 and 24 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hosaka et al. (US 5,896,292) (hereinafter Hosaka) in view of Csipkes et al. (hereinafter Csipkes) (US 6,167,401).

Hosaka teaches the step of:

- providing an administrator mode (“input/output units 703-706”, col. 11, lines 4-10, and “program”, “assigned”, “data input”, “computer”, col. 4, lines 29-33). It is inherent that Hosaka’s “administrator mode” occurs when varying the inputs/outputs.

Hosaka fails to explicitly teach the step of:

- protecting provisions of the operator mode using a password input in the administrator mode

However, the reference of Csipkes teaches logging into a manufacturing control network with a user ID and password (“user logs into the system at step 101”, “user ID and password”, col. 3, lines 42-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a password input in the administrator mode to the existing method of Hosaka for the reason of increasing the security of the system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached at (703) 305-8498.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is none.

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November 1, 2002

Majid Barankhah
MAJID BARANKHAH
PRIMARY EXAMINER